Attorney's Docket: 2003FR302 Serial No.: 10/584,440

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Response to Office Action Mailed 03/05/2008

This listing of claims will replace all prior versions, and listings of claims in the application:

1.(Currently Amended) Process for the preparation of a 2-(n-alkyl)-3-(4-hydroxybenzoyl)benzofuran of formula (i)

in which R represents a linear or branched alkyl radical including from 1 to 5 carbon atoms and R1 represents a linear or branched alkyl radical including from 1 to 3 carbon atoms, a linear or branched alkoxy radical including from 1 to 3 carbon atoms, a halogen atom or a nitro radical, in which-said process consisting of reacting

a) a 2-alkyl-3-carboxybenzofuran of formula (II)

in which R and R1 have the meanings already indicated, is reacted with a halogenating agent to produce the compound of formula (III)

in which X represents a halogen atom and R and R1 have the meanings already indicated,

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b) then further reacting the compound of formula (III) is reacted with an alkyl phenyl ether of formula

in which R2 represents a linear or branched alkoxy radical including from 1 to 5 carbon atoms,

in the presence of a Lewis acid, to produce a mixture of 2-alkyl-3-(4-alkoxybenzoyl)benzofuran of formula (IV) and of 2-alkyl-3-(2-alkoxybenzoyl)benzofuran of formula (IVa)

$$R1$$
 $R1$ 
 $R2$ 
 $R1$ 
 $R1$ 
 $R1$ 
 $R2$ 

in which R, R1 and R2 have the meanings already indicated, <u>and</u>
c) and <u>dealkylating</u> the mixture is subjected to a dealkylation reaction
to produce the product of formula (I), <u>and optionally isolating said</u>
product of formula (I) which is isolated, if desired.

2.(Original) Process according to Claim 1, characterized in that the halogenating agent is selected from the group consisting of phosphorus trichloride PCI<sub>3</sub>, phosphorus pentachloride PCI<sub>5</sub>, phosphorus oxychloride

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POCl<sub>3</sub>, oxalyl chloride (COCl)<sub>2</sub>, phosgene COCl<sub>2</sub> and thionyl chloride SOCl<sub>2</sub>.

- 3.(Original) The process according to Claim 1, wherein a molar ratio of the halogenating agent/compound of formula (II) ranges from 1 to 5.
- 4.(Original) The process of claim 1, wherein the alkyl phenyl ether is anisole.
- 5.(Original) The process of claim 1, wherein the reaction of the compound of formula (II) with the halogenating agent is carried out in the presence of an organic solvent selected from the group consisting of halogenated aliphatic hydrocarbons, aromatic hydrocarbons phenyl ethers, and mixtures thereof.
- 6.(Original) The process of claim 1, wherein the reaction of the compound of formula (II) with the halogenating agent is carried out in the presence of an organic solvent which is anisole.
- 7.(Original) The process of claim 1, wherein a molar ratio of alkyl phenyl ether/compound of formula (III) ranges from 1 to 10.
- 8.(Original) The process of claim 1, wherein the reaction between the compound of formula (III) and the alkyl phenyl ether takes place at a temperature between -5°C and ambient temperature.

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9.(Original) The process of claim 1, wherein the reaction between the compound of formula (III) and the alkyl phenyl ether is carried out in the presence of an organic solvent which is a halogenated aliphatic hydrocarbon, or an aromatic hydrocarbon or an alkyl phenyl ether, or a mixture thereof.

- 10.(Original) The process of claim 1, wherein the Lewis acid used in the reaction between the compound of formula (III) and the alkyl phenyl ether is selected from the group consisting of an aluminium halide, a boron halide, a titanium halide, a tin halide, a bismuth halide, an iron halide and aluminium chloride.
- 11.(Original) The process of claim 1, wherein a molar ratio of Lewis acid/compound of formula (III) molar ratio ranges from 1 to 10.
- 12.(Original) The process of claim 1, wherein the dealkylation reaction c) is carried out under a heating temperature of from 40 to 100 °C in the presence of a Lewis acid.
- 13.(Original) The process of claim 1, wherein the dealkylation reaction is carried out in the presence of a Lewis acid selected from the group consisting of an aluminium halide, a boron halide, a titanium halide, a tin halide, a bismuth halide, an iron halide and aluminium chloride.

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- 14.(Original) The process of claim 1, wherein in the dealkylation reaction a molar ratio of Lewis acid/compound of formula (IV) and (IVa) ranges from 1 to 10.
- 15.(Original) The process of claim 12, wherein the heating temperature in the dealkylation stage is from 50°C to 65°C.
- 16.(Original) A compound of formula (V)

in which R3 represents a hydroxyl radical or represents a halogen atom, R4 represents a linear or branched alkyl radical including from 2 to 5 carbon atoms and R'<sub>1</sub> represents a nitro radical.

- 17.(Original) The compound according to Claim 16, characterized in that R'<sub>1</sub> represents a nitro radical in the 5 position and R4 represents an n-butyl radical.
- 18.(Original) A process for the preparation of a 2-(n-alkyl)-3-carboxybenzofuran of formula (II), characterized in that a 3-(1-hydroxyalkylidene)-3H-benzofuran-2-one of formula (VI):

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or its 3-alkanoyl-3H-benzofuran-2-one ketonic tautomeric form of formula (VII):

in which R4 represents a linear or branched alkyl radical including from 2 to 5 carbon atoms and R'<sub>1</sub> represents a nitro radical, is treated by heating and by an acid catalyst in concentrated aqueous solution of at least 80% by weight and then the expected product of formula (II)

is isolated.

19.(Original) Process according to Claim 18, characterized in that the treatment by heating of the compound of formula (VI) or of formula (VII) is carried out in a carboxylic acid.

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20.(Original) The process of claim 18, wherein the acid catalyst in concentrated aqueous solution is concentrated sulphuric acid at between 80% and 95% by weight.

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21.(Original) The process of claim 1, wherein the Lewis acid in the reaction of the compound of formula (III) and the alkyl phenyl ether is aluminum chloride.